

Appln. No. Serial No. 10/699,516

Amdt. Dated 10/28/05

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### **REMARKS**

Claims 1-49 are pending in this application. The Examiner rejected Claim 1 under 35 U.S.C. §103(a) and indicated that Claims 2-49 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 1 has been amended in the foregoing amendment.

### **Claim 1 is Patentable Over the Cited References**

The Examiner rejected Claim 1 under 35 U.S.C. §103(a) as being unpatentable over Fig. 3 of the specification, which describes a prior art circuit, in view of U.S. Patent No. 5,859,572 to Hill. The Examiner alleged that Fig. 3 discloses the transceiver of Claim 1, except for the resonance causing unit, but that Hill discloses a transmitter arrangement for power specific impedances comprising a resonance-causing unit configured to cause a series resonance. The Examiner alleged that it would have been obvious to one having ordinary skill in the art at the time the invention was made to use Hill's resonance causing unit in Fig. 3 "in order to increase in amplitude of an electric device."

Hill describes a balanced oscillator and transmitter system 10 having a resonator 12 for generating a reference signal that is input to a first oscillator 18 and a second oscillator 24. The resonator 12 preferably comprises a surface acoustic wave ("SAW") device or alternatively a bulk acoustic wave ("BAW") device. See Column 3, lines 23-30. The interface between the resonator and each oscillator includes a parasitic impedance 14, 16. The oscillators generate outputs which are 180 degrees out of phase, but equal in magnitude.

The system includes an antenna which uses the parasitic impedances to radiate the balanced oscillator output. Hill describes that the signal radiated by the antenna is substantially lower in power and that the signal to noise ratio is substantially enhanced when compared to the outputs of other circuits. Column 4, lines 1-14.

In contrast, the resonance causing unit of Claim 1 causes a series resonance with a parasitic capacitance between the transmission unit ground and the Earth ground and a parasitic capacitance between the electric field propagating medium and the Earth ground.

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The series resonance reduces the attenuation of the modulated signals transmitted to the electric field propagating medium.

The resonator of Hill does not describe the resonance causing unit of Claim 1 because the resonator does not provide the claimed series resonance. The resonator merely provides a reference signal to the oscillators. The parasitic impedances described by Hill are shown in Figures 1 and 2 as between the resonator and the oscillators. The impedances are not between the transmission unit ground and the Earth ground or the electric field propagating medium and the Earth ground, as required by Claim 1.

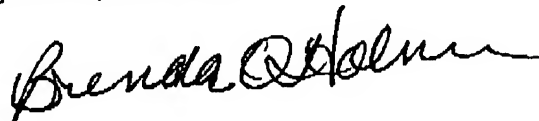
There is no motivation to combine the circuit of Fig. 3 and Hill in the manner suggested by the Examiner. There is no teaching describing how the resonator of Hill could be used in the transmission circuit of Fig. 3. Even if the resonator of Hill is connected to the oscillator within the transmission circuit, the connection does not cause the required series resonance between the electric field propagating medium and the Earth ground since the resonator would be contained within the transmission circuit. Furthermore, the connection of the resonator of Hill to the oscillator of Fig. 3 would not reduce the attenuation of the modulated signals transmitted to the electric field propagating medium. As such, there is no motivation to combine Fig. 3 and Hill, because the resonator of Hill functions differently from the resonance causing unit of Claim 1 and modifying Fig. 3 to include the resonator of Hill would not function to serve the purpose of eliminating the adverse effect caused by the parasitic impedance. Accordingly, amended Claim 1 would not have been obvious to one of ordinary skill from the cited references at the time Applicants made the claimed invention.

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**CONCLUSION**

The foregoing is submitted as a complete response to the Office Action identified above. This application should now be in condition for allowance, and the Applicants solicit a notice to that effect. If there are any issues that can be addressed via telephone, the Examiner is asked to contact the undersigned at 404.685.6799.

Respectfully submitted,



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